

Clearing Up Homicide Clearance Rates

by Charles Wellford and James Cronin

Law enforcement's ability to make arrests following crimes appears to have significantly diminished in recent years. This is especially true for homicide: From 1980 to 1996, the rate at which homicide cases were cleared nationally decreased more than 7 percent (see figure 1). (The clearance rate is the proportion of crimes in a jurisdiction for which the police report an arrest.)

Although the rates nationally are declining, some cities have continued to show fairly high clearance rates for homicide as well as for total crime. Others have had much lower rates than the average. What makes one department's clearance rates better than another? It turns out to be more than the way the department defines and counts its clearance rates or how many homicides occur each year.

Researchers from the University of Maryland, working with the Justice Research and Statistics Association, designed a multi-State study in four large cities to identify the factors that affected the clearance of homicides during 1994 and 1995.

They found that certain persistent factors are related to an agency's ability to clear homicide cases. These factors can be divided into two cate-

about the authors

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gories: (1) Police practices and procedures, over which the police have complete control, such as the actions of the first officer on the scene and the number of detectives assigned to the case, and (2) case characteristics, over which the police have no control, such as type of weapon used and involvement of drugs.

Key police-related characteristics include how many detectives are assigned to the case and for how long, how quickly detectives arrive at the scene, and—what appears to be very important—the activities undertaken by the first officer on the scene. (See "What Kinds of Cases Are More Likely to Be Closed?" on next page.)

The findings suggest that a law enforcement agency's policies and practices can have a substantial impact on the clearance of homicide cases and can be increased by improving certain investigation policies and procedures involving

the actions taken by the first officer to the scene, how quickly detectives arrive on the scene and the subsequent actions they take, and how many resources the agency dedicates to the investigation.

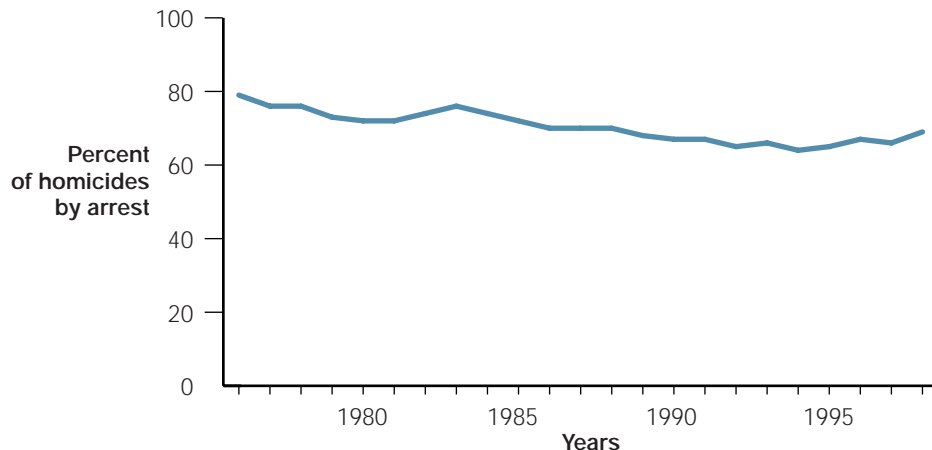
Factors That Appear to Affect Homicide Clearance Rates

Surprisingly, very little research has been conducted on the determinants of clearance rates for any type of crime, including homicide. The homicide study's review of existing literature revealed no comparative studies or systematic attempts to understand homicide clearance. The few studies of burglary and robbery clearance that are available were used to guide the development of the homicide study.¹

Some scholars have speculated about what factors affect homicide clearance rates. Riedel and Rinehart² and Cardarelli and Cavanaugh,³ for example, have demonstrated the decline in clearances and have suggested several reasons:

- Changes in the nature of homicides. In the past, homicide was understood primarily to be a crime of passion involving family members or close acquaintances. These existing social relationships and the way in which the crime was carried out made identifying the alleged offender relatively easy. This, in turn, led to higher rates of clearance. In recent years, however, homicides are more often stranger-to-stranger

Figure 1: Percentage of Homicides Cleared by Arrest, 1976–1998



Source: FBI, Uniform Crime Reports, *Crime in the United States, 1976–98*. See also <http://www.ojp.usdoj.gov/bjs/homicide/addinfo.htm>.

What Kinds of Cases Are More Likely to Be Closed?

Researchers analyzed 215 possible predictors of clearance and found 51 factors that were statistically significant—factors that, if present, were likely to lead to the case being closed. When these significant variables were analyzed simultaneously (using multivariate analysis techniques), the following appeared to be key to closing the case:

Factors Within Police Control That Lead to Closure

Initial Response:

- The first officer on the scene immediately notifies the homicide unit, medical examiner's office, and crime lab.
- The first officer on the scene secures the area and attempts to locate witnesses.
- A detective arrives at the scene within 30 minutes.

Actions of Detectives:

- Three or four detectives are assigned to the case.*
- Detectives describe the crime scene, including measurements, in their notes.
- Detectives follow up on all witness information.
- Detectives attend the postmortem examination.

Other Police Responses:

- A computer check, using the local Criminal Justice Information System, is conducted on the suspect, the gun, and any witnesses.*
- A witness at the crime scene provides valuable information about the circumstances of the death, the motivation, the identification of the suspect or victim, and the whereabouts of the suspect.*
- Witnesses, friends, acquaintances, and neighbors of the victim are interviewed.*

* These are among the top 15 factors that were found to be most highly correlated with clearing the case in the multivariate analysis.

- The medical examiner prepares a body chart of the victim.*
- The attending physician and medical personnel are interviewed.
- Confidential informants are used.

Factors Outside Police Control That are Related to Closure

- The suspect is African American or Hispanic.*
- The homicide occurs in a private location (e.g., a home or club) rather than a public location (e.g., a city street).*
- An eyewitness observes the homicide.*
- A weapon is found at the crime scene.
- The homicide is not drug-related.*
- The victim is a member of a gang or drug organization.
- The conflict is over money or property other than drugs.
- The homicide is committed in an attempt to get money to buy drugs.
- The suspect kills the victim to avoid retaliation.

Typical Scenarios

- **Actions of the first officer on the scene.** The homicide was more likely to be cleared if the first officer on the scene notified the homicide unit, the medical examiner, or the crime lab, or if the officer attempted to locate witnesses. The case was more likely to be closed if the crime scene was measured.
- **Detectives.** A case was more likely to be solved if 3, 4, or 11 detectives were assigned to the case, compared to just 1 detective. The case was more likely to be solved if it took the detectives less than 30 minutes to arrive at the crime scene. The case was more likely to be solved if the detectives followed up on witness information and attended the postmortem examination.
- **Drugs.** The presence of drugs in a case has an effect on its closing.

Cases were less likely to be closed when drugs were a circumstance.

- **Weapons.** Cases in which the victim was killed by a rifle, knife, or personal weapon (hands or feet) were more likely to be solved than cases in which the victim was killed with a handgun. Furthermore, the case was more likely to be cleared if the police identified the weapon used to kill the victim or a weapon was found at the scene.
- **Motivation.** The case was more likely to be closed if the homicide preempted an anticipated retaliatory attack, involved a conflict over money or property other than drugs, or the suspect was defending him- or herself. The case was less likely to be closed if the homicide was punishment for informing.
- **Witnesses and sources of information.** A case was more likely to be closed when witnesses were at the crime scene and provided valuable information, including the circumstances of death, the motivation for the homicide, identification of the suspect, identification of the victim, and location of the suspect. The crime was more likely to be closed when a neighborhood survey provided valuable information, when friends and neighbors of the victim were interviewed, and when confidential informants provided valuable information or came forward on their own. When police used surveillance in a case, the case was more likely to be solved.
- **Computer checks.** When computer checks were conducted on a suspect or a gun, the case was more likely to be solved, but when computer checks were conducted on the victim or witnesses, the case was less likely to be solved.
- **Medical examiner.** Cases were more likely to be solved when the medical examiner collected specimens, recovered a projectile, or prepared a body chart.

Cities, Number of Cases, Definitions, and Data Collection Methods

The study examined 798 homicides in four large American cities (198 to 200 cases in each city) during 1994 and 1995. The researchers chose large cities because of their substantial number of homicides in relation to the United States as a whole.

The cities were selected to maximize variation on homicide and total index crime clearance rates measured from 1980 through 1993:

- **City A:** low homicide clearance rates, low total clearance rates.
- **City B:** high homicide clearance rates, low total clearance rates.
- **City C:** low homicide clearance rates, high total clearance rates.
- **City D:** high homicide clearance rates, high total clearance rates.

To encourage participation in the study, cities were assured that their names would not be revealed.

The cases were selected so that the proportion of open and closed homicide cases in the sample matched that of the entire homicide caseload for those years for that city. This resulted in a total of 589 (74 percent) solved cases and 209 (26 percent) unsolved cases in the sample. Of the 589 closed cases, 50 percent

were solved within 1 week; 93.2 percent were solved within 1 year.

The predominate motivation, as classified by the data collectors who read the files, for committing the homicide for all cases was "other conflict" (43.0 percent). "Other conflict" involves an argument between the victim and offender that does not involve money or drugs. The second largest motivation for the homicide was "drug-related" (26.4 percent), which includes failure to pay a drug debt, robbery during a drug deal, and conflict over drug territory. The third greatest motivation for the homicide was "retaliation" (22.7 percent).

Definition of a Closed Case

The research design considered a case closed when an arrest was made, the homicide was a murder/suicide situation, or the homicide was in self-defense. If a warrant was issued but the suspect was not taken into custody, the case was considered open.

An arrest warrant was issued and the suspect was arrested in 80 percent of the closed cases. In the remaining closed cases, the suspect was already in custody (17 percent), the homicide was a murder/suicide (2 percent), or the homicide was in self-defense (1 percent). A warrant was issued but the suspect was

not taken into custody in 8 percent of the open cases.

Data Collection Methods

Data were collected from open and closed cases by researchers from the Statistical Analysis Centers in the States where each city was located. Two data collection instruments were employed:

- The Homicide Attribute Coding Instrument provided a detailed description of the circumstances surrounding the homicide case, along with information regarding prior criminal records of victims and suspects, the relationship between victims and suspects, drug use by suspects or victims at the time of the incident, number of eyewitnesses, and suspected motivation for the homicide.
- The Investigative Instrument provided information on the process used by homicide detectives to investigate the case, such as the status of the case, the number of detectives assigned to the case, what evidence was found at the crime scene and what types of checks and tests were performed on the evidence found, whether search warrants were issued, who was interviewed, and what information was obtained by following up on the initial stages of the investigation.

crimes and involve more activity in the illegal drug market. Identification of alleged offenders in stranger-to-stranger crimes and drug market-related homicides is much less likely.

- Changes in police resources. As police resources were stretched when crime rates were rising through the 1980's, the ability to devote substantial numbers of experienced personnel and other resources to police investigations may have diminished. This change in the way police departments responded also could have had a negative impact on rates of clearance.

- Changes in bystander behavior. One proposition is that the willingness of citizens to cooperate with police, particularly in large urban areas, has decreased and therefore the role of third parties as witnesses and sources of information has decreased. As a result, it has become more difficult for police to identify alleged offenders, especially those in stranger-to-stranger crimes.

These suggestions provide interesting anecdotal hypotheses that might explain the national trend in declining homicide clearance, but they have not been subjected to systemat-

ic research, and none of the explanations are easily reconciled with the stability of the clearance rates found in the four cities in the study. Analysis of clearance rates in these cities from 1980 through 1994, for example, showed that clearance rates remained virtually the same: The city with a high total clearance rate and high homicide rate remained consistently so throughout this period, as did the cities with high clearance rates/low homicide rates, low clearance rates/high homicide rates, and low clearance rates/low homicide rates. (See "Cities, Number of Cases, Definitions, and Data Collection Methods.")

As Maxwell has observed, the absence of systematic research is in part the result of limitations with the national data on homicides.⁴ The primary sources of homicide data are the supplemental homicide reports filed with the Federal Bureau of Investigation. These reports are quite useful for basic descriptions of homicides, but they do not contain information on whether the offense was cleared and, if so, how. They also do not provide detailed information on the nature of the offense or, more important for the study of homicide clearance rates, on the nature of the investigation.

The existing research literature helps to document the decline in the rates of clearance, suggests possible explanations for the decline, and establishes that national data are not useful in advancing our understanding of clearance. But the literature does not help law enforcement agencies develop policies and procedures that might increase the rate of homicide clearance.

Police Actions Can Lead to High Clearance Rates

The homicide clearance study examined 215 factors in homicide cases to determine the relationship of each factor to whether the case was cleared by arrest. Of the 215 factors analyzed, 51 were found to be significantly and positively associated with closing a homicide case. These factors include both police practices and case characteristics, and 37 of the 51 factors appear to be within the control of police. (See “What Kinds of Cases Are More Likely to Be Closed?” page 4) When the researchers conducted further analysis of the 51 significant variables in relationship to homicide clearance (i.e., analyzed them

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simultaneously), they found that 15 remained significant.

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The data indicate that the number of detectives assigned to a case is particularly important: Assigning a minimum of three detectives and perhaps four appears to increase the likelihood of clearing it. Assigning more than 4 detectives does not appear to make a difference unless an agency makes a massive investment of 11 or more detectives. Only one city, which had a high homicide clearance rate, routinely used a great number of homicide detectives on a case. That city used 11 detectives in 63 percent of the 200 cases in its sample.

The city with the consistently highest clearance rates also was the city that was much more likely to devote 11 detectives during the initial days of investigation.

The length of time it takes detectives to arrive at the scene also is key. Cases in which the detective arrived within 30 minutes were more likely to be cleared. These findings have clear implications for departments considering how many detectives to assign to homicide cases, as well as related policies about overtime and the availability of take-home cars for detectives.

The findings also suggest the growing importance of computer checks of various types, particularly checks on guns, suspects, and victims. Cases in which computer checks—using the local Criminal Justice Information System—were conducted on the victim, suspect, witnesses, and guns were more likely to be cleared.

Drug cases continue to be the most difficult for police to solve, but the results of the homicide clearance study show that even in drug cases, police response can lead to an arrest.

In addition to helping agencies determine what they can do differently to improve their homicide clearance rate, this research also may be useful in developing

measures of police performance. Homicide cases, like all other cases, begin with different levels of “solvability” and differ in regard to the probability of an arrest. But the research suggests that few homicide cases, given the right initial response, the right timing, and the right dedication of resources, cannot be cleared.

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Notes

1. See Eck, J.E., *Solving Crimes: The Investigation of Burglary and Robbery*, Washington, D.C.: Police Executive Research Forum, 1983; and Greenwood, P.W., J.M. Chaiken, and J. Petersilia, *The Criminal Investigation Process*, Lexington, MA: D.C. Heath, 1977.
2. Riedel, M., and A. Rinehart. “Clearance, Missing Data, and Murder.” Paper presented at the annual meeting of the Academy of Criminal Justice Sciences, 1994.
3. Cardarelli, A.P., and D. Cavanaugh, “Uncleared Homicides in the United States: An Exploratory Study of Trends and Patterns.” Paper presented at the annual meeting of the American Society of Criminology, 1992.
4. Maxwell, M.G., “Circumstances in Supplementary Homicide Reports,” *Criminology* 27 (1989): 671–695.

For More Information

To download a copy of the full report, visit the Justice Research and Statistics Association Web site: <http://www.jrsa.org>. Paper copies are available from the National Criminal Justice Reference Service at 1–800–851–3420, P.O. Box 6000, Rockville, MD 20849–6000 (NCJ 181356). Photocopying fees apply. Copies also are available for \$15 from the Justice Research and Statistics Association, 777 North Capitol Street NE., Suite 801, Washington, D.C. 20002, 202–842–9330.

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